

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of :
Tohru UEDA et al. :
U.S. Patent No. 5,026,835 : ATTN: APPLICATION BRANCH
Issued June 25, 1991 :
PYRIMIDINE 2'-METHYLIDENE : *1614571*
NUCLEOSIDE COMPOUNDS

REISSUE DECLARATION AND POWER OF ATTORNEY

Honorable Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

Undersigned request that they be allowed to surrender
U.S. Letters Patent No. 5,026,835 for an improvement in:
PYRIMIDINE 2'-METHYLIDENE NUCLEOSIDE COMPOUNDS
which patent was granted on June 25, 1991 and is assigned in
its entirety to Yamasa Shoyu Co., Ltd. and Yoshitomi
Pharmaceutical Industries Ltd., corporations of Japan, on
whose behalf and with whose consent, this application is made,
and that said Letters Patent be reissued to undersigned for
the invention set forth in the attached specification and
claims.

A Request for a Title Report is submitted herewith in a
separate paper.

Undersigned declare that their residence, post office
address and citizenship are stated below next to their names;
and they verily believe that they are the original, first and
joint inventors of the improvement described and claimed in
the foregoing reissue specification and for which improvement
they solicit a patent; that they have reviewed and understand
the content of the above-identified specification, including
the claims; that they acknowledge their duty to disclose
information of which they are aware which is material to the
examination of this application in accordance with Title 37,
Code of Federal Regulations 1.56(a); that they verily believe
the original patent to be wholly or partly inoperative or
invalid by reasons of the fact that they claimed both more

than they had a right to claim and less than they had a right to claim in the patent. In this regard:

1. In connection with claiming more than they had a right to claim in the original patent, during the prosecution of the corresponding European application, Assignees received a communication from the E.P.O. dated June 2, 1992 in which the application was rejected over JP-A-63258818 on the ground that the compounds claimed were structurally similar to the compound DMDC of said Japanese patent. DMDC is a compound wherein R¹ of claim 1 is -NH₂ and R², R³ and R⁴ are all -H.

The original U.S. patent (claim 1) erroneously encompassed DMDC and a related compound wherein R¹ is -OH.

In this regard, original claim 1 in the application recited "except that R¹ is amino or hydroxy and both of R³ and R⁴ are hydrogen". This raised an ambiguity since it was intended by Applicants that such material be excluded and not included. Therefore, the original claim should have read "except the case where R¹ is amino or hydroxy and both of R³ and R⁴ are hydrogen".

An attempt was made to correct this matter in the Amendment of October 18, 1990. However, the Amendment raised even further ambiguities and, moreover, the U.S. PTO made a printing error in deleting the term "not" at the bottom line of claim 1 of the Amendment of October 18, 1990 thus even further confusing the claims.

Accordingly, the claims have been amended to clarify the fact that compounds within the scope of claim 1 wherein R¹ is -NH₂ and R³ and R⁴ are hydrogen, are excluded.

This, in turn, excludes the known compound DMDC and a related compound wherein R¹ is -OH, from the scope of claim 1.

Accordingly, these compounds have now been deleted from claim 1.

2. With regard to claiming less than they had a right to claim:

a. New claims 3 to 8 are directed to compounds

which were deleted from the scope of the claims during prosecution of the original patent. These compounds were subsequently found to have unobviously superior activity to DMDC.

b. The stearoyl compound of claim 2 is now claimed as a single compound in claim 8 for more complete protection.

c. The term "stearoyl" has been replaced by "C₂C₃₀ acyl" in claim 1 to provide more complete protection and to make claim 1 properly generic to the remaining claims.

d. New claims 9 and 10 are directed to compositions, in order to provide more complete protection.

The undersigned further declare that such errors which render said Letters Patent wholly or partly inoperative or invalid arose without any deceptive intention.

The undersigned herewith offer to surrender the original patent, a soft copy of which is annexed hereto, and the original of which will be tendered before the allowance of this reissue application.

The undersigned hereby claim the benefit under 35 USC 119 of Japanese Application 63-310865 filed December 7, 1988.

The undersigned hereby appoint V.M. Creedon, Reg. No. 17111, John T. Miller, Reg. No. 21120, John T. Fedigan, Reg. No. 24347, Michael R. Davis, Reg. No. 25134, Matthew M. Jacob, Reg. No. 25154, Jeffrey Nolton, Reg. No. 25408, Henry M. Zykorie, Reg. No. 27477 and Michael Stone, Reg. No. 32442, who together constitute the firm of WENDEROTH, LIND & PONACK, jointly and severally, attorneys to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected therewith.

Send correspondence to:

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Southern Building, Suite 700
805 Fifteenth Street, NW
Washington, DC 20005

Direct telephone calls to:

(202) 371-8850

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1st Inventor	:	Tohru UEDA, deceased, by his legal representative
Residence	:	<hr/>
Citizenship	:	<hr/>
P.O. Address	:	<hr/>
2nd Inventor	:	Takuma SASAKI ²⁻⁰⁰
Residence	:	Ishikawa, Japan JPY
Citizenship	:	Japan
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Citizenship	:	Japan
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4th Inventor	:	Takanori MIYASHITA ⁴⁻⁰⁰
Residence	:	Chiba, Japan JPY
Citizenship	:	Japan
P.O. Address	:	1-12, Suehiro-cho Choshi-shi, Chiba 288, Japan
5th Inventor	:	Shinji SAKATA ⁵⁻⁰⁰
Residence	:	Chiba, Japan JPY
Citizenship	:	Japan
P.O. Address	:	372-2, Matsumoto-cho 5-chome Choshi-shi, Chiba 288, Japan
6th Inventor	:	Keiji YAMAGAMI ⁶⁻⁰⁰
Residence	:	Saitama, Japan JPY
Citizenship	:	Japan
P.O. Address	:	Yoshitomi Pharmaceutical Industries, Ltd. c/o Tokyo Research Laboratories, 7-25, Koyata 3-chome, Iruma-shi, Saitama 358, Japan
7th Inventor	:	Akihiro FUJII ⁷⁻⁰⁰
Residence	:	Saitama, Japan JPY
Citizenship	:	Japan
P.O. Address	:	Yoshitomi Pharmaceutical Industries, Ltd. c/o Tokyo Research Laboratories, 7-25, Koyata 3-chome, Iruma-shi, Saitama 358, Japan

Undersigned further declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the instant patent application or any patent issuing thereon.

1st Inventor: Tohru UEDA, deceased,
by his legal representative Date: _____

2nd Inventor: Takuma SASAKI Date: _____

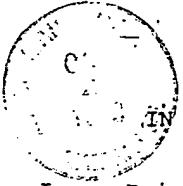
3rd Inventor: Akira MATSUDA Date: _____

4th Inventor: Takanori MIYASHITA Date: _____

5th Inventor: Shinji SAKATA Date: _____

6th Inventor: Keiji YAMAGAMI Date: _____

7th Inventor: Akihiro FUJII Date: _____



#5

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Tohru UEDA et al. :

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which patent was granted on June 25, 1991 and is assigned in its entirety to Yamasa Shoyu Co., Ltd. (now Yamasa Corporation as a result of a corporate name change) and Yoshitomi Pharmaceutical Industries, Ltd., corporations of Japan, on whose behalf and with whose consent, this application is made, and that said Letters Patent be reissued to undersigned for the invention set forth in the attached specification and claims.

A Request for a Title Report is submitted herewith in a separate paper.

Undersigned declare that their residence, post office address and citizenship are stated below next to their names; and they verily believe that they are the original, first and joint inventors of the improvement described and claimed in the foregoing reissue specification and for which improvement they solicit a patent; that they have reviewed and understand the content of the above-identified specification, including the claims; that they acknowledge their duty to disclose information of which they are aware which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations 1.56(a); that they verily believe the original patent to be wholly or partly inoperative or invalid by reasons of the fact that they claimed both more

than they had a right to claim and less than they had a right to claim in the patent. In this regard:

1. In connection with claiming more than they had a right to claim in the original patent, during the prosecution of the corresponding European application, Assignees received a communication from the E.P.O. dated June 2, 1992 in which the application was rejected over JP-A-63258818 on the ground that the compounds claimed were structurally similar to the compound DMDC of said Japanese patent. DMDC is a compound wherein R¹ of claim 1 is -NH₂ and R², R³ and R⁴ are all -H.

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b. The stearoyl compound of claim 2 is now claimed as a single compound in claim 8 for more complete protection.

c. The term "stearoyl" has been replaced by " C_2C_{30} acyl" in claim 1 to provide more complete protection and to make claim 1 properly generic to the remaining claims.

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The undersigned hereby appoint V.M. Creedon, Reg. No. 17111, John T. Miller, Reg. No. 21120, John T. Fedigan, Reg. No. 24347, Michael R. Davis, Reg. No. 25134, Matthew M. Jacob, Reg. No. 25154, Jeffrey Nolton, Reg. No. 25408, Henry M. Zykorie, Reg. No. 27477 and Michael Stone, Reg. No. 32442, who together constitute the firm of WENDEROTH, LIND & PONACK, jointly and severally, attorneys to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected therewith.

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1-01 /

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2nd Inventor	:	Takuma SASAKI
Residence	:	<u>Ishikawa, Japan</u> JPY
Citizenship	:	<u>Japan</u>
P.O. Address	:	<u>12-5-401, Izumino-cho 4-chome,</u> Kanazawa-shi, Ishikawa 921, Japan
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Residence	:	<u>Hokkaido, Japan</u> JPY
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P.O. Address	:	<u>1-7-501, Nishi 12-chome, Kita 24-jo,</u> Kita-ku, Sapporo-shi, Hokkaido 001, Japan
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Citizenship	:	<u>Japan</u>
P.O. Address	:	<u>372-2, Matsumoto-cho 5-chome</u> Choshi-shi, Chiba 288, Japan
6th Inventor	:	Keiji YAMAGAMI
Residence	:	<u>Saitama, Japan</u> JPY
Citizenship	:	<u>Japan</u>
P.O. Address	:	<u>Yoshitomi Pharmaceutical Industries,</u> Ltd. c/o Tokyo Research Laboratories, <u>7-25, Koyata 3-chome, Iruma-shi,</u> Saitama 358, Japan
7th Inventor	:	Akihiro FUJII
Residence	:	<u>Saitama, Japan</u> JPY
Citizenship	:	<u>Japan</u>
P.O. Address	:	<u>Yoshitomi Pharmaceutical Industries,</u> Ltd. c/o Tokyo Research Laboratories, <u>7-25, Koyata 3-chome, Iruma-shi,</u> Saitama 358, Japan

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Undersigned further declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the instant patent application or any patent issuing thereon.

ADDED PAGE TO DECLARATION & POWER OF ATTORNEY

FOR U. S. PATENT APPLICATIONS

2-11

I, Sumiko UEDA, hereby declare that I am a citizen of Japan residing at 6-27, Maruyamanishimachi 8-chome, Chuo-ku, ^{JPX} Sapporo-shi, Hokkaido 064 Japan and that I am executing and signing the declaration to which this is attached as the sole heiress of:

Tohru UEDA, late a citizen of Japan formerly residing at 6-27, Maruyamanishimachi 8-chome, Chuo-ku, Sapporo-shi, Hokkaido, Japan.

That, upon information and belief, I aver those facts which the inventor is required to state.

I further declare that all statements made herein of my own knowledge are true, and that all statements on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements, and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Sumiko UEDA Sumiko Ueda Date July 25, 1993

1st Inventor: Sumiko Ueda Date: July 25, 1993
Tohru UEDA, deceased,
by his legal representative

2nd Inventor: Takuma Sasaki Date: August 6, 1993
Takuma SASAKI

3rd Inventor: Akira Matsuda Date: July 21, 1993
Akira MATSUDA

4th Inventor: Takanori Miyashita Date: July 20, 1993
Takanori MIYASHITA

5th Inventor: Shinji Sakata Date: July 20, 1993
Shinji SAKATA

6th Inventor: Keiji Yamagami Date: July 15, 1993
Keiji YAMAGAMI

7th Inventor: Akihiro Fujii Date: July 15, 1993
Akihiro FUJII



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of :

Tohru UEDA et al. :

U.S. Patent No. 5,026,835 : ATTN: APPLICATION BRANCH

Issued June 25, 1991 :

PYRIMIDINE 2'-METHYLIDENE
NUCLEOSIDE COMPOUNDS

CONSENT OF ASSIGNEE TO FILING OF REISSUE APPLICATION

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Yamasa Shoyu Co., Ltd. (now Yamasa Corporation as a result of a corporate name change) and Yoshitomi Pharmaceutical Industries, Ltd., co-Assignees of the entire interest in the subject patent, by virtue of an Assignment recorded on February 5, 1990 at Reel 5231, Frames 204 to 205, hereby consent to the filing of the attached Reissue application.

The undersigned have reviewed all the evidentiary documents in the chain of Title of the above patent and, to the best of the undersigned's knowledge and belief, title is in the Assignees indicated above.

The undersigned verify that they are authorized to take this action on behalf of Yamasa Corporation and Yoshitomi Pharmaceutical Industries, Ltd.

The undersigned hereby declare that all statements made herein of their own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that

such willful false statements may jeopardize the validity of
the application or any patent issuing thereon.

July 21, 1993
Date

Takashi Nagata
Name, Title
Authorized Signing Officer of
Yamasa Corporation

July 19, 1993
Date

Tetsuro Takahashi
Name, Title
Authorized Signing Officer of
Yoshitomi Pharmaceutical
Industries., Ltd.